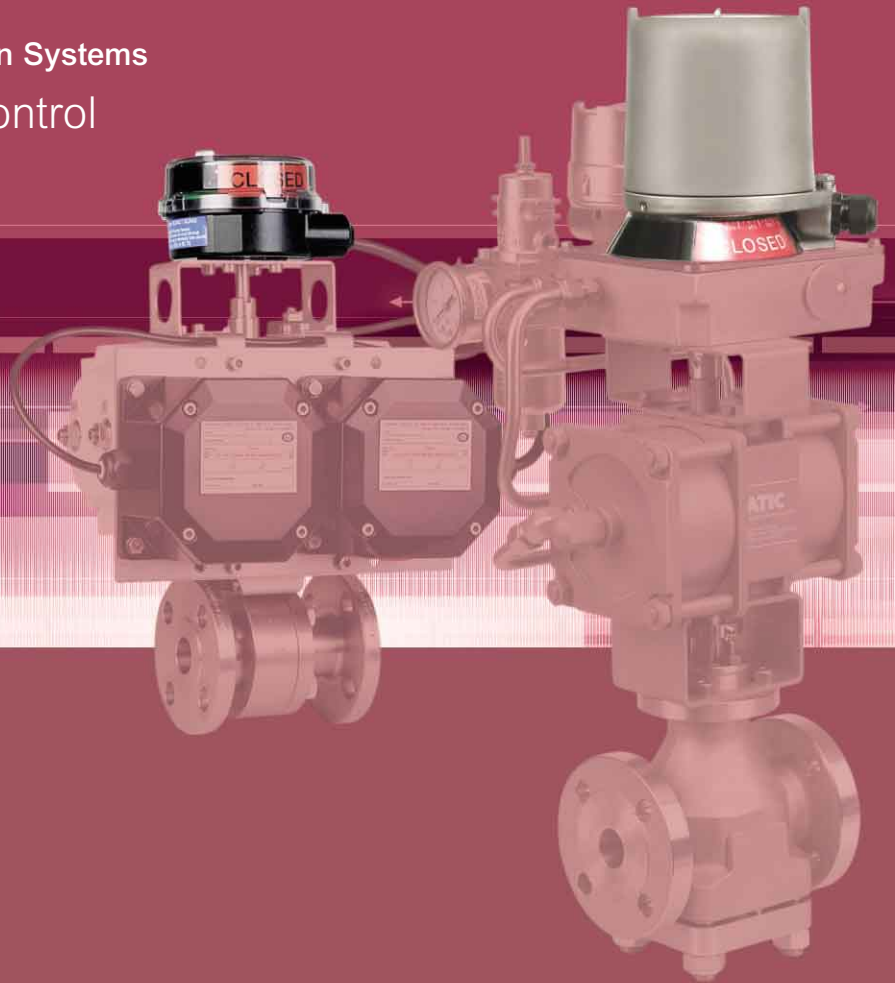




Monitoring and Communication Systems
for Integrated Valve Control



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General Overview

The process industries are being subjected to dramatic changes primarily through the increasing diffusion of field communication into integrated control systems (e.g. fieldbus). These control systems require suitable interfaces for the field equipment and final control elements (i.e. control valves).

Imtex controls is a manufacturing and marketing company established in 1990 specialising in the supply of advanced valve monitoring and communication systems. Using many years of field application experience within the area of valve control,

we are committed to the design, manufacture and supply of technically advanced solutions to ensure that customers are supplied with the best automated valve product to suit their specific requirements.

Our products are designed to be safe, easy to install, use, maintain and environmentally friendly. Products comply with the applicable sections of the most demanding international electrical standards (e.g. ATEX) and to the requirements of the latest European Directives in terms of safety and the environment.

Type **SRX**

Type SRX Valve Position Monitor provides a high integrity system with protection from corrosive or environmental attack found offshore and in typical process plants. The IP66 enclosure has a bolt-on cover and top mounted high visibility open/close position indicator.

Materials

Enclosure – CF8M Stainless Steel
Shaft – Stainless Steel

Functions

16, 17, 33, 40, 42, 43, 92, 93, 94,
95, 96, 97

Hazardous Area Certification/Approvals

EEx ia IIC T6
(Functions 17, 40, 42, 43 Only)

Type **SLR**

Type SLR Valve Position Monitor has evolved to meet the latest requirements of the general and process industries. The IP67 enclosure design comes with a unique quick access lockable cover allowing for reduced installation costs and space requirements whilst ensuring rugged reliability in the most testing environments.

Materials

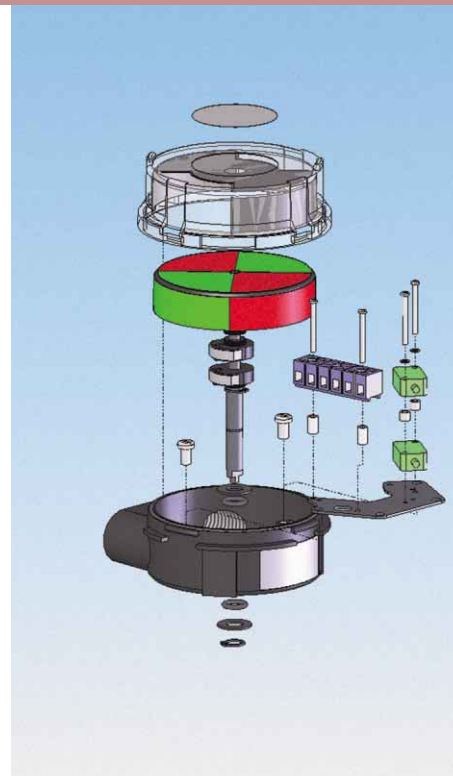
Enclosure – Polycarbonate Resin
Shaft – Stainless Steel

Functions

16, 17, 33, 40, 42, 43, 92, 93, 94,
95, 96, 97

Hazardous Area Certification/Approvals

EEx ia IIB T6
(Functions 17, 40, 42, 43 Only)





Our engineers are available at all times to provide technical support to customers. By request, our sales office will be pleased to supply full documentation, drawings and wiring diagrams and support site personnel who may require assistance on installation or operation of any products offered.



Valvescan Bus Communication

Using the VCT (Valve Communication Terminal) Dual Module which integrates solid state position sensing, communication electronics, power outputs, auxiliary inputs and wire termination into a single compact package, all mechanical platforms listed can be connected on a bus communication network. Systems can be supplied to operate with the the most popular bus protocols providing significant cost savings for installation and maintenance downtime when compared with conventional analogue systems.

Functions

72, 92, 93, 94, 95, 96, 97

Hazardous Area Certification/Approvals

EEx ia IIC T6 (Function 72 Only)

EEx d IIB T4

(Type EQ Function 92 & 96 Only)

Type AMI

Type AMI Valve Communication and Control device incorporates an advanced high accuracy position sensor system with push button settings that may be made quickly and conveniently. The integral pneumatic pilot valve operated by the universal burnout-proof solenoid (single or dual coil operation available) offers contemporary features which further enhance the operating performance of the automated valve system.

Materials

Enclosure – Epoxy Coated Anodised Aluminium Housing with Polycarbonate Cover & Visual Indicator
(Optional – Stainless Steel Housing)

Functions

33, 44, 92, 93, 94, 95, 96, 97

Hazardous Area Certification/Approvals

EEx ia IIC T5 (Function 44 Only)

Type AQ, EQ & IQ

Type AQ, EQ & IQ Valve Position Monitors provide a system ideally suited for hazardous area applications onshore or offshore. The IP67 enclosure has a screw-on cover and is supplied with a high visibility open/close position indicator all designed to minimise the total size of the automated valve package.

Materials

Enclosure – Anodised Marine Grade Aluminium Urethane Coated or CF8M Stainless Steel
(Optional – Polycarbonate Cover)

Shaft – Stainless Steel

Functions

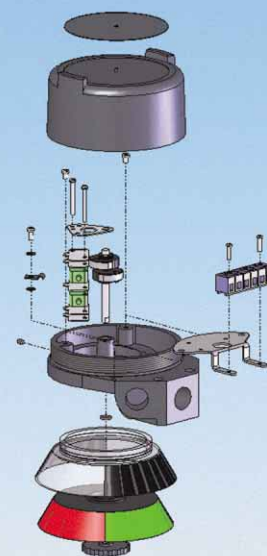
14, 16, 17, 25, 33, 40, 42, 43, 52, 55, 56, 58, 59, 70, 72, 92, 93, 94, 95, 96, 97
(Optional – 74)

Hazardous Area Certification/Approvals

EEx ia IIC T6 (Functions 17, 40, 42, 43, 52, 56, 59, 70, 72 Only)

EEx d IIB T4 (Type EQ Aluminium Only)

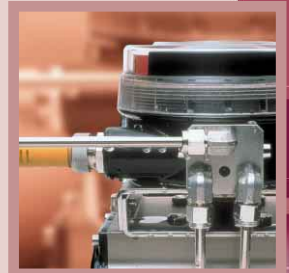
EEx d IIC T6 (Type IQ Only)



Electrical Functions - Standard Options**

Mechanical Switch	
14 (2)	DPDT Rating 4.5 Amps @ 125 / 250 VAC
16 (2) & 55 (4)	V3 SPDT Rating 10 Amps @ 125 / 250 VAC, 0.5 Amps @ 125 VDC
17 (2) & 56 (4)	V3 SPDT Gold Plated Contacts Rating 1 Amp @ 125 VAC, 0.5 Amps @ 30 VDC
Reed Type Proximity Switch	
25 (2) & 58 (4)	SPDT Maxx-Guard Rating – Volts Max. 500 V AC / DC, Current Max. 3 Amps, Power Max. 100 Watts / VA, Min. 3 Watts
40 (2) & 59 (4)	SPST Maxx-Guard Rating 0.15 Amps @ 30 VDC
Inductive Proximity Sensor	
33 (2)	SST Dual Module Normally Open Rating 0.3 Amps @ 125 V AC / DC
34 (2)	SST Dual Module Normally Closed Rating 0.3 Amps @ 125 V AC / DC
42 (2) & 52 (4)	2-Wire or 3-Wire V3 E.g. 2-Wire Namur – Current Rating Target On : < 1 mA Target Off : > 3 mA, Nominal Voltage 8 VDC / 3-Wire PNP or NPN – Rating 100 mA @ 60 VDC
43 (2)	2-Wire or 3-Wire Cylindrical E.g. 2-Wire Namur – Current Rating Target On : < 1 mA Target Off : > 3 mA, Nominal Voltage 8 VDC / 3-Wire PNP or NPN – Rating 100 mA @ 60 VDC
44 (2)	SST Namur Dual Module Current Rating Target On : < 1 mA Target Off : > 3 mA, Voltage Range 6 to 29 VDC
Position Transmitter	
70 (1)	4 to 20 mA Output Loop Powered (Resistive Type) Supply Voltage 8 to 28 VDC, Linearity Error <1% of Full Scale Option – HART Protocol
71 (1)	4 to 20 mA Output Loop Powered (Capacitive Type) Supply Voltage 12 to 30 VDC
72 (1)	Digital Output Bus Powered (Resistive Type) – FOUNDATION Fieldbus / Profibus PA Supply Voltage 9 to 32 VDC
74 (1)	4 to 20 mA Output Loop Powered (High Performance Resistive Type) Supply Voltage 8 to 28 VDC, Linearity Error <0.5% of Full Scale
Bus Communication	
92	DeviceNet Module 2 x Discrete Inputs, Open & Closed / 2 x Power Outputs (Solenoids) 24 VDC, 4 Watts / 1 x 4 to 20 mA Auxiliary Input
93 & 94	FOUNDATION Fieldbus Module Function 93 (Bus Powered) - 2 x Discrete Inputs, Open & Closed / 2 x Discrete Outputs (Piezo) 2 mA @ 6.5 VDC each Function 94 (Externally Powered) - 2 x Discrete Inputs, Open & Closed / 2 x Power Outputs (Solenoids) 4 Watts Total Combined, Current Limited to 200 mA
95	Modbus Module 2 x Discrete Inputs – Open & Closed / 2 x Power Outputs (Solenoids) 10 to 24 VDC / 1 x 4 to 20 mA Auxiliary Input
96 & 97	AS-Interface Module Function 96 (31 Devices per Network) - 2 x Sensor Inputs – Open & Closed / 2 x Auxiliary Inputs / 2 x Power Outputs (Solenoids) 25 to 30 VDC, 4 Watts Function 97 w / Extended Addressing (62 Devices per Network) - 2 x Sensor Inputs – Open & Closed / 2 x Auxiliary Inputs / 1 x Power Outputs (Solenoids) 25 to 30 VDC, 4 Watts

**Other Functions Available On Request



Hazardous Area Options - ATEX/IEC

Protection Concept	Standard	Zones	Certification Marking	Type	Electrical Functions
Intrinsically Safe	EN 50020	0, 1 & 2	II 2 G / EEx ia IIC T5 IEC Pending	AMI	44
			II 2 G / EEx ia IIC T6 ATEX	AQ	17, 40, 42, 43, 52, 56, 59, 70, 72
			II 1 G / EEx ia IIC T5 ATEX	EC	44
			II 2 G / EEx ia IIB T6 ATEX	SLR	17, 40, 42, 43
			II 2 G / EEx ia IIB T6 ATEX Pending	SRX	17, 40, 42, 43
Flameproof	EN 50018	1 & 2	II 2 G / EEx d IIB T4 ATEX	EQ	16, 17, 25, 33, 40, 42, 55, 70, 92, 96
			II 2 GD T80°C / EEx d IIC T6 ATEX	IQ	14, 16, 17, 25, 33, 40, 42, 43, 52, 55, 58, 59, 70